



Contribution ID: 743

Type: **Talk in the parallel session**

Electromagnetic fields in polish doughnut models

Wednesday, 7 July 2021 11:30 (20 minutes)

Analytical models of accretion disks have been an important tool to understand the basic underlying principles of accretion. Classically, these models are constructed using an isolated Kerr black hole. However, astrophysical black holes are usually surrounded by electromagnetic fields. We consider here the presence of electromagnetic test fields that are weak in the sense that they do not influence the spacetime geometry. The origin of these fields could be internal, like a tiny electric charge of the black hole, or external, like the galactic magnetic field. We show a general method to construct polish doughnuts in such settings and discuss some particular examples.

Primary authors: HACKMANN, Eva (ZARM, University of Bremen); TROVA, Audrey (ZARM, University of Bremen); SCHROVEN, Kris; KARAS, Vladimír; KOVAR, Jiri; SLANY, Petr; LAEMMERZAHN, Claus (University of Bremen)

Presenter: HACKMANN, Eva (ZARM, University of Bremen)

Session Classification: Accretion Discs and Jets

Track Classification: Accretion: Accretion discs and jets